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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,207	01/04/2002	Martin L. Plumer	S01.12-0846/STL 10285	2028

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10/06/2003

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EXAMINER

EVANS, JEFFERSON A

ART UNIT

PAPER NUMBER

2652

DATE MAILED: 10/06/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/039,207	Applicant(s) PLUMER ET AL.	
	Examiner Jefferson Evans	Art Unit 2652	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 3, 6, 9, 12-16, 19 and 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5, 7, 8, 10, 11, 17, 18, 20, 22 and 23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
     If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
     a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> | 6) <input type="checkbox"/> Other: _____                                    |

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Claims 1 to 23 are pending.

### ***Election/Restrictions***

1. Applicant's election without traverse of Species One, figure 4, in Paper No. 4 is acknowledged. Applicant says claims 1-5, 7-11, 17, 18, and 20-23 read on Species One. The Examiner agrees with the exceptions of claims 3, 9, and 21 which are drawn to the double pancake coil embodiment of Species Three. The Examiner notes that it would have been more accurate if he had set forth that there were four species: the pole structure of figure 4 with a helical coil structure, the pole structure of figure 5 with a helical coil structure, the pole structure of figure 4 with a double pancake coil structure, the pole structure of figure 5 with a double pancake coil structure. Elected Species One corresponds to figure 4 with a helical coil structure.

Claims 3, 6, 9, 12-16, 19, and 21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

### ***Drawings***

2. The drawings are objected to because the drawings do not adequately depict the nature of the flux flow in figures 4 and 5. The important issue is how the flux interacts with the magnetic medium and this is not clear from figures 4 and 5. It is also noted that an overall flux flow should be depicted to provide adequate understanding of how the invention operates and is distinguished from the prior art. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the

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drawings will not be held in abeyance. Applicant is reminded of the prohibition against the entry of new matter.

***Claim Rejections - 35 USC § 112***

3. Claims 1, 2, 4, 5, 7, 8, 10, 11, 17, 18, 20, 22, and 23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Figures 4 has one arrow showing flux flow and figure 5 has two arrows, however this is considered to be inadequate to establish the flux interaction between a read/write element of the invention and a magnetic medium, especially as the medium is not depicted in either figure 4 or 5. Also, the overall flux flow in the system is unclear as there is neither depiction or description of the overall flow. Such information is needed to show how the inventive read/write head operates and avoids unwanted fringing effects or similar such potential problems. The flux is not conducted to a back gap via a return pole, but where does it go instead? How is flux prevented from interacting with the MR element shields in such a manner that one or both shields acts as a return path?

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 4, 5, 7, 10, 11, 17, 18, 22, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al (U.S. 6,128,166). Note figure 7. Tanaka discloses a single write pole 26 separated from a write coil 27 by an insulating material, and a MR element 24 between shield layers 23.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 8, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al in view of Cohen et al (U.S. 5,703,740). Tanaka does not disclose a helical coil arrangement.

Cohen discloses a helical coil arrangement.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the coil of Tanaka et al take on a helical arrangement. The motivation would have been: such a coil arrangement was an effective manner in which to provide an increased number of turns and to increase efficiency.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jefferson Evans whose telephone number is

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703-308-1610. The examiner can normally be reached on Monday to Friday, 9:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 703-305-9687. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.



JAE

September 26, 2003

Jefferson Evans  
Primary Examiner  
Art Unit 2652

**JEFFERSON EVANS  
PRIMARY EXAMINER**